

## **WHAT IS CLAIMED IS:**

1. An anhydrous treatment composition comprising:
  - a) a reactive agent,
  - b) a solvent in which the reactive agent is soluble and which is water-miscible.
2. An anhydrous treatment composition according to Claim 1 which comprises from about 0.01% to about 10%, by weight of the composition, of the reactive agent, and from about 25% to about 95%, by weight of the composition, of the water-miscible solvent.
3. An anhydrous treatment composition according to Claim 2, wherein the reactive agent is selected from the group consisting of electrophilic groups, nucleophilic groups or protected thiol groups.
4. An anhydrous treatment composition according to Claim 3, wherein the reactive agent additionally comprises a cosmetically active functional group.
5. A anhydrous treatment composition according to Claim 4, wherein the reactive agent comprises an electrophilic reactive group selected from the group consisting of halotriazines, haloquinoxalines, halopyrimidines, vinylsulfones,  $\beta$ -haloethylsulfones,  $\beta$ -sulfatoethylsulfones, acrylates, methacrylates, acrylamides, methacrylamides, maleimides, epoxides, acylhalides, esters, carbamates, dithiocarboxylic acid esters, alkoxy silanes, thiosulfates, anhydrides, urea derivatives, isothiocyanates, isocyanates, lactones, thiosulfates, isothiuroniums, azalactones and mixtures thereof.
6. An anhydrous treatment composition according to Claim 4, wherein the reactive agent comprises a nucleophilic reactive group selected from the group consisting of thiols, thiolates, thiols or thiolates containing quaternary salts, thioalkyl esters, thioalkylamides, thiol or thiolate derivatives of cysteamine, and mixtures thereof.
7. An anhydrous treatment composition according to Claim 4, wherein the reactive agent comprises a protected thiol reactive group having the formula

$$R-(S-Pr)_m$$

where R is a mono or multivalent cosmetically active functional group, S is sulfur, Pr is a protecting group and m is an integer between 1 and 100.

8. An anhydrous treatment composition according to Claim 7, wherein the protecting group is selected from the group consisting of heterocyclic protecting groups,  $sp^2$  aliphatic trigonal carbon protecting groups,  $sp^3$  carbon electrophilic protecting groups, phosphorus protecting groups, metal based protecting groups, non-metal and metalloid based protecting groups other than phosphorus, energy-sensitive protecting groups and mixtures thereof.
9. An anhydrous treatment composition according to Claim 1, wherein the water-miscible solvent has a Vaughan Solubility Parameter of from about  $8.0 \text{ (cal/cm}^3)^{0.5}$  to about  $17.0 \text{ (cal/cm}^3)^{0.5}$ .
10. An anhydrous treatment composition according to Claim 1, wherein the water-miscible solvent is selected from the group consisting of ethyl formate, dimethyl isosorbide, acetylacetone, 2-butanone, acetone, methyl acetate, ethyl acetate, propyl acetate, ethoxyethanol, dipropylene glycol monomethyl ether, butyl lactate, t-butyl alcohol, phenyl acetate, 2-propoxyethanol, 2-isopropoxyethanol, methoxypropanol, isopropyl lactate, hexyl alcohol, butoxyethanol, tripropylene glycol (PPG-3), triacetin, methoxyethanol, isopropyl alcohol, PEG-8, methyl lactate, PEG-6, PEG-5, PEG-4, N-methylpyrrolidone, propyl alcohol, dipropylene glycol (PPG-2), acetonitrile, phenoxyethanol, triethylene glycol, hexylene glycol, ethyl alcohol,  $\gamma$ -butyrolactone, butylene glycol, propylene carbonate, dimethyl sulfoxide, diethylene glycol, ethoxydiglycol, propylene glycol, pyrrolidone, pyrrolidone-2, methyl alcohol, ethylene carbonate, ethylene glycol, acetamide, glycerin, butyl carbitol, 1,3-dioxolane, dimethoxymethane, 1,2-hexanediol, dipropylene glycol butyl ether, dipropylene glycol t-butyl ether, propionaldehyde, diethoxymethane, glycerol formal,  $\gamma$ -valerolactone,  $\alpha$ -methyl- $\gamma$ -butyrolactone, and butyl acetate, ethanol, isopropyl alcohol, and mixtures thereof.
10. An anhydrous treatment according to Claim 9, wherein the water-miscible solvent is selected from the group consisting of N-methylpyrrolidinone, propylene carbonate,  $\gamma$ -butyrolactone,  $\gamma$ -valerolactone, propylene glycol, dipropylene glycol, ethoxydiglycol, ethoxyethanol, dimethoxymethane, dimethyl isosorbide, butyl lactate, and mixtures thereof.

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11. A composition comprising

- greater than about 25% water-miscible solvent,
- from about 0.5% to about 25% surfactant, and
- water

wherein the composition is thickened by high solvent containing lamellar liquid crystals.

12. A composition according to Claim 11 wherein the surfactant has a Critical Packing Factor greater than about 0.5 and less than or equal to about 10.

13. A composition according to Claim 12 wherein the surfactant is selected from the group consisting of fatty alcohols having a chain length of from about 14 to about 22; fatty acids having a chain length of from about 14 to about 22; condensation products of C16 to C22 aliphatic alcohols with alkylene oxides; mono- and di-alkyl alkanolamides with carbon chain lengths of from about 12 to about 22; long chain esters of polyols and sugars; polyethoxylated and/or polypropoxylated alkylphenols; polyhydroxylated polyethers of fatty alcohols, fatty acid alkanolamides, and amine oxides; condensation products of ethylene oxide with long chain amids; quaternary ammonium halides in which the alkyl group has from about 12 to about 22 carbon groups; alkyl sulfonates, alkyl ether sulfonates, alkylaryl sulfonates, alkanoyl isethionates, alkyl succinates, alkyl sulfosuccinates, N-alkoyl sarcosinates, alkyl phosphates, alkyl ether phosphates, alkyl ether carboxylates, and alpha-olefin sulfonates; sodium, magnesium, ammonium and mono-, di- and triethanolamine salts of alkyl sulfonates, alkyl ether sulfonates, alkylaryl sulfonates, alkanoyl isethionates, alkyl succinates, alkyl sulfosuccinates, N-alkoyl sarcosinates, alkyl phosphates, alkyl ether phosphates, alkyl ether carboxylates, and alpha-olefin sulfonates, gemini surfactants; lipid surfactants; and mixtures thereof.

14. A composition according to Claim 13 wherein the surfactant is selected from the group consisting of cetyltrimethylammonium chloride, cetyltrimethylammonium bromide, cetearyl phosphate, phosphatidyl choline, serine, choline, ethanolamine, palmitic acid, myristic acid, oleic acid, stearic acid, arachidonic acid, linolenic acid, linoleic acid and arachidic acid, cetearyl alcohol, cetyl alcohol, stearyl alcohol, arachidyl alcohol, oleyl alcohol, ceteareth ethoxylates with between 10 and ethylene oxide groups, ceteth

ethoxylates with between 10 and 30 ethylene oxide groups, steareth ethoxylates with between 1- and 30 ethylates, and mixtures thereof.

15. A system for treating amino-acid based substrates comprising the anhydrous treatment composition of Claim 1 and a separately packaged aqueous composition.

16. A system according to Claim 15 wherein the aqueous composition further comprises a surfactant.

17. A system according to Claim 15 wherein the anhydrous composition further comprises a surfactant.

18. A system according to Claim 17 wherein the surfactant has a Critical Packing Factor greater than about 0.5 and less than or equal to about 10.

19. A system according to Claim 18 wherein the surfactant is selected from the group consisting of fatty alcohols having a chain length of from about 14 to about 22; fatty acids having a chain length of from about 14 to about 22; condensation products of C16 to C22 aliphatic alcohols with alkylene oxides; mono- and di-alkyl alkanolamides with carbon chain lengths of from about 12 to about 22; long chain esters of polyols and sugars; polyethoxylated and/or polypropoxylated alkylphenols; polyhydroxylated polyethers of fatty alcohols, fatty acid alkanolamides, and amine oxides; condensation products of ethylene oxide with long chain amids; quaternary ammonium halides in which the alkyl group has from about 12 to about 22 carbon groups; alkyl sulfonates, alkyl ether sulfonates, alkylaryl sulfonates, alkanoyl isethionates, alkyl succinates, alkyl sulfosuccinates, N-alkoyl sarcosinates, alkyl phosphates, alkyl ether phosphates, alkyl ether carboxylates, and alpha-olefin sulfonates; sodium, magnesium, ammonium and mono-, di- and triethanolamine salts of alkyl sulfonates, alkyl ether sulfonates, alkylaryl sulfonates, alkanoyl isethionates, alkyl succinates, alkyl sulfosuccinates, N-alkoyl sarcosinates, alkyl phosphates, alkyl ether phosphates, alkyl ether carboxylates, and alpha-olefin sulfonates, gemini surfactants; lipid surfactants; and mixtures thereof.

21 20. An article comprising:

- a package having a first chamber and a second chamber, each chamber having a dispensing orifice,
- an anhydrous treatment composition contained in the first chamber, and
- an aqueous composition contained in the second chamber.

22 21. A method for treating amino-acid based substrates comprising dampening of the amino-acid based substrate with water and applying a safe and effective amount of the treatment composition of Claim 1 to the substrate.

23 22. A method for treating hair comprising dampening of the hair with water and applying a safe and effective amount of the treatment composition of Claim 1 to the substrate.

24 23. A method for treating amino-acid based substrates comprising the mixing of the anhydrous treatment composition of Claim 1 with water and applying a safe and effective amount of the composition-water mixture to the substrate.

25 24. A method for treating hair comprising the mixing of the anhydrous treatment composition of Claim 1 with water and applying a safe and effective amount of the composition-water mixture to the hair.

26 25. A method for treating amino-acid based substrates comprising the mixing of the anhydrous treatment composition of Claim 1 with water and applying a safe and effective amount of the composition-water mixture to the substrate.

27 26. A method for treating hair comprising the mixing of the anhydrous treatment composition of Claim 1 with water and applying a safe and effective amount of the composition-water mixture to the hair.

28 27. A method for treating amino-acid based substrates comprising the simultaneous dispensing the anhydrous treatment composition and aqueous composition of the system of Claim 15, mixing the compositions, and applying the resulting mixture to hair

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28. A method for treating hair comprising the simultaneous dispensing the anhydrous treatment composition and aqueous composition of the system of Claim 15, mixing the compositions, and applying the resulting mixture to hair

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29. A method of thickening compositions containing greater than 25% water-miscible solvent comprising adding water and adding a solvent to form high solvent containing lamellar liquid crystals.